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THE UNIVERSITY OF ALBERTA

A FORMATIVE AND EXPERIMENTAL
EVALUATION OF A SIMULATION
GAME OF MARITAL COMMUNICATION

BY

EDWARD B. BRANCH, JR.

A THESIS

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The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies and Research, for acceptance, a thesis entitled "A Formative and Experimental Evaluation of a Simulation Game of Marital Communication", submitted by Edward B. Branch, Jr. in partial fulfillment of the requirements for the degree of Doctor of Philosophy in Counseling Psychology.

ABSTRACT

The purpose of the present study was the evaluation of a simulation game designed to increase marital satisfaction. The game, TWO-TO-ONE was designed to accomplish increased marital satisfaction by promoting skills of communication and by being enjoyable to play.

The evaluation consisted of two parts: a formative evaluation and an experimental study of the effects of playing the game.

The study utilized a post-test only control group design. Four groups were used. Two comparison treatment groups were included in order to examine the relationships of a similar treatment and of time spent together. The subjects of the study were 96 individuals comprising 48 couples. Each couple had been to at least one pre-natal class together during the first pregnancy and were in the early stages of child rearing.

The experimental findings indicated that there was no change on the variables of perceived loving behavior, perceived self-disclosure, and self-esteem. There were indications that marital satisfaction scores were positively influenced by playing TWO-TO-ONE. There were tendencies indicating that TWO-TO-ONE may have a positive influence on self-disclosing behavior.

The formative evaluation showed TWO-TO-ONE to be judged as a relatively enjoyable game which promoted understanding between the couple. Participant couples did not report seeing the game as beneficial to their relationship. Also, some components of the game were evaluated negatively. Competition was generally absent when

playing the game. Expert judges rated TWO-TO-ONE as a useful tool for promoting understanding between a couple. They also stated they would recommend it as a supplement to counseling.

The implications of the results are discussed in relation to marriage enrichment and marriage enrichment programs.

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CHAPTER I

Introduction

Rationale

Play has been described as childrens' work. Vygotsky (1967) goes further to explain play in more detail and as a means of aiding in the development process. The present writer would adapt the above concept of play in regard to maintaining viable marriages, to state, that a lot of work in keeping a relationship vital should be play, i.e., enjoyable, fun. All work and no play can make a marriage a dull institution.

McLeish writes:

There are a number of psychological theories about the nature of play, each of which lays stress on one aspect or another. But there is a consensus that the essential difference between work and play is one of attitude to the task; in play, the activity can be broken off at any time without penalty (in other words, it is strictly a voluntary activity); it usually bears some relation to the tasks of the real world, for example, it may be a rehearsal of real-life roles, or a "make-believe" where the normal discipline of natural consequences in terms of pains, penalties, defaults, etc. for poor performance belong to the realm of fantasy rather than to harsh reality. Games, in contrast to work, involve a larger or smaller element of spontaneity, free choice, which makes for enjoyment. In the normal case, the enjoyment element is the main objective of the exercise. (1970, p. 13)

Over the past six years this writer has been developing a game designed to simulate situations which may occur in the marital life cycle. Married couples, or those preparing for marriage can play the game in order to work on communication aspects of their relationship.

Simulations are not new. In the past, simulations have been frequently thought of as models. By adding the word game, one may

avoid the somewhat static connotation of the word model and thereby consider process. Simulations have been used in many areas. The link trainer in which many pilots practiced flying while safely on the ground, simulated flight conditions. Game plans in football are constructed to deal with hypothetical situations. Dress rehearsals for a play attempt to create an environment as close to the anticipated real situation as possible. One might conclude that simulation really is practice in an environment or situation resembling an anticipated real situation. The rationale is that practice of skills in a relatively safe situation should enhance performance in the real situation. Anxiety may be reduced by having been successful in the simulation.

It is assumed in this study that enhanced performance leads to self-confidence and satisfaction. Satir (1972) writes that love begins a marriage but process keeps it going. Several other investigators have concerned themselves with the attraction and process phenomena of coupling (Lewis, 1972; Tharp, 1963; Luckey, 1960; Murstein, 1971; Foote, 1956; Miller, Nunnally, & Wackman, 1975). Effective performance of empathy (Luckey), role-taking (Lewis), understanding or shared meaning (Miller, et al) appears related to Satir's concept of process.

This writer, having been influenced by the above decided to emphasize the process aspects of coupling in developing a simulation game as part of a program aimed at the maintenance of marital health. Stating this in terms of a different model, the aim of such a game was to promote developmental marriage as a process as opposed to the more traditional concept of marriage as a state. Implicit in the term developmental marriage are the concepts of adaptibility (Kieren, 1972) and role-making (Aldous, 1974) as the partners confront normal crisis

points (Rapoport, 1963) in the family life cycle (Hill & Hansen, 1960).

The idea that all couples encounter crises during the life cycle of their relationship emphasizes adaptability and role-making as key variables to the process aspects of coupling. Two early crisis points which a couple confront are marriage and parenthood. At each point the partners must create new roles or re-make old roles to their mutual satisfaction. In writing about couple communication, Miller et al (1975) states:

...we have assumed that people and relationships are constantly changing....

To deal with and even help create change, we've presented a set of frameworks for helping you increase awareness of yourself, your partner, and the process of your relationship, and communication skills and principles for putting this awareness into action. The basic outcome we think you'll experience, as you use the frameworks, skills and principles, will be a feeling of greater control over your life and increased self-reliance, self-direction, and self-respect. Further, we think experimentation with your increased awareness and new skills will help you and your partner discover new alternatives in your relationship - and yield greater flexibility and variety in your lives.
(p. 280)

A process such as the one described is dependent on specific skills of communication, specifically the communication of understanding. Understanding may or may not just happen. Man has a tendency to assume that what he experiences is the same experience for another. The work of perceptual psychologists such as Ames (1951), Cantril (1957), and Combs and Snygg (1959) has pointed to how such errors of perception may occur. A person from North American culture talking with a person from the hills of New Guinea would illustrate this phenomenon by assuming that the person from New Guinea could see the vapor trail of a

jet plane. If the New Guinean did not have a category in which to include the concept "jet plane" he would see the same sensory data, i.e., a thin cloud but he would not have the same perception as the North American.

The concept of feedback borrowed from systems theory is necessary in order to arrive at a shared meaning (understanding) (Miller, et al, 1975). Without shared meaning persons operate on an empathic assumption which may or may not be accurate. Fortunately people can generally function on empathic assumption. Having to go through the above steps to achieve a shared meaning for all transactions would be paralysing.

An important behavior for relationship vitality becomes the ability to recognize issues or situations which indicate the need of a step-by-step approach to understanding. Such an ability appears to be partially tied to level of self-esteem (Satir, 1972; Branch, 1974). A person can listen to another only when he has a large enough feeling of worth that he can afford to neglect, at least temporarily his own perceptions or wants long enough to arrive at an understanding of the perceptions or wants of another. A person whose need level requires that he receive constant agreement with his perceptions, most likely will not be capable of risking the checking of his perceptions with another. He will therefore be incapable of giving another the experiences of being understood. Not being able to establish understanding or a shared meaning precludes adaptability or role-making.

Without the ability to role-make a relationship becomes static or closed. In a closed system, information cannot be exchanged. Problem solving therefore becomes dependent on either rigid role taking with no creative problem solving abilities or on outside forces (doctors,

counselors, police, etc). The integrity of the system is lost as entropy occurs according to the second law of thermodynamics (Bertalanffy, 1968).

A twelfth century chronicler, Henry of Huntington, observed that an interest in his past was one of the distinguishing characteristics of man as compared with the other animals (Baugh, 1935). In looking to the future of marriage and the family, one must check the rear view mirror in order to avoid the dead ends of the past. From Plato to the present there have been both suggestions and attempts to do away with the family. The actual attempts have been relatively few, small, and short-lived. The large-scale Soviet experiment did not last for more than a generation. The most successful attempt in North America was the Oneida Community which was founded in 1848. It lasted thirty years. Studies of the Kibbutzim in Israel are finding that marriage is becoming more regularized, and that the structure of the family is reappearing (Leslie, 1968).

The lessons of history indicate to us that marriage and the family are not likely to disappear from the earth. Landsman (1966) has written of "one's best self." There may also be a "best" marriage and a "best" family. The term "best" is used in the meaning of a transcendent experience, as reported by Privette (1964), to mean the exceeding of a usual expectation. The "best" marriage or "best" family is one which surprises its members with unanticipated moments of transcendence. This study is aimed toward the development of a simulation game which hopefully will be a tool in promoting better marriages.

General Statement of the Problem

The present study is concerned with the formative and experimental evaluation of TWO-TO-ONE, a simulation game of marital communication. Included in the evaluation is a research study examining the effects of playing the game.

TWO-TO-ONE uses play as a method of increasing marital satisfaction. It is designed to accomplish this through the following specific objectives:

- (a) Increased understanding by increasing self-disclosures.
- (b) Increased self-esteem by increasing the number of expressed loving behaviors.
- (c) Increased play time as a couple by being enjoyable to play.
- (d) Increased opportunity to talk about situations which might occur in a marriage prior to the actual occurrence.
- (e) Increased opportunity to confront unresolved issues which have previously occurred.
- (f) Increased recognition by the couple of the danger of thinking naturalistically, as pointed out by Vincent (1973), i.e., believing that if they are in love, no skills are necessary in understanding one another's thoughts, feelings and intentions.

The formative portion of the study was included to discover deficiencies and successes in relation to the stated objectives of the game (Scriven, 1972). The research study examines the efficacy of the game, TWO-TO-ONE, on levels of self-esteem, perceived self-disclosure, perceived loving behaviors, rated self-disclosure, and marital satisfaction.

CHAPTER II

Review of the Literature and Conceptual Framework

Sirjamaki (1948) states that the ultimate criterion by which marriages are judged is the personal happiness of husband and wife with each partner finding satisfaction in loving and being loved. Husbands, wives, and children are expected to seek personal fulfillment, and should be encouraged by other family members to do so. Sirjamaki also points out that: "The straining of family members for individualistic goals may blunt their sense of obligation to each other and to the larger society" (p. 470). Doing one's own thing as a partner in marriage is good insofar as it makes more viable relationships possible. However, it seems that a commitment to and with the marriage and/or family should be present. Blocher (1966) augments that with his statement, "Identity is the sense of belonging to, of harmony with, of caring about other individuals, groups, and ideals. Its opposite is alienation and isolation... ."

The concept of Occam's Razor states that one should explain a phenomenon by the most parsimonious means available. The idea that man is self-centered with his basic goal to maintain and enhance the self-concept (Moore, 1967) though parsimonious has in some ways been a particularly unpalatable one. Man's notion of himself as just being one rung below the angels along with a misunderstanding of the importance of the self in Christianity has led to a disparagement of the self, a concern over someone holding himself in too high a regard, and in general a confusion of the idea of avariciousness with the concept of being self-centered. The style in which this paper is

written is offered as evidence. Instead of "I" the reader will discover such terms as the writer or one. The following section explores the importance of a liked self to viable human relations.

Systems and Exchange Theory in Relation to Self and Relationship Development

The introduction of systems theory into the behavioral and social sciences has opened a door to a more palatable view or rational for the maintenance and enhancement viewpoint. It allows one to answer the question, "If man is self-centered or solely interested in the maintenance and enhancement of himself, how does one explain altruistic behaviors?" The answer is that the self-concept of fully-functioning, actualizing, mature persons encompasses more than the physical self. It includes a sense of belonging to or being in harmony with one's environment (Blocher, 1966; Boone, 1954). If a system is defined as being composed of units and a relationship among those units, then it not only becomes logical to maintain and enhance the perceived self, but it is logical that an improvement of the relationships or communication chain interactions within the systems will lead to a more functional, self-enhancing system. The communication in a system tends to promote the growth or the deterioration of the units within the system. An open system promotes the exchange of information whereas a closed system responds only to outside force (Bertalanffy, 1968; Bateson, 1972).

Every part of a system is so related to the other parts that a change in one part produces a change in the other parts and in the system. For purposes of explanation, the differentiation of systems

into open systems and closed systems has freed the sciences concerned with life-phenomena and behavioral-phenomena from the closed models of classical physics and chemistry (Watzlawick, 1967, p. 122). Such a differentiation allows for a conceptual shift from energy to information as an explanatory principle. As Watzlawick states it:

In a circular and self-modifying system, "results" (in the sense of alteration in state after a period of time) are not determined so much by initial conditions as by the nature of the process, or the system parameters. Simply stated, this principle of equifinality means that the same results may spring from different origins, because it is the nature of the organization which is determinate. (p. 127)

In an open system the exchange or feedback of information can generate its own input for change. Goal states become more significant than causes. In looking at behavior, if the answer as to the why is elusive, it may be more fruitful to ask to what end.

Exchange theory also relates to the framework of the present study. Its leading proponents have been Thibaut and Kelley (1959) and Homans (1961). Exchange theory deals with the concepts of profit and loss. If a reward from an interaction is greater than the cost, then a person senses a profit. If it is the other way around, he senses a loss. A criticism of this theory is that it seems to make of human behavior a rather selfish, egocentric, endeavor. However, by looking at exchange theory in relation to systems theory, one can see parsimonious benefits from the use of exchange theory. For instance, if one sees himself as part of a system such as marriage, and recognizes that the strength of that system depends upon the units, then he must commit himself to his emergence as a potent unit of that system. One

must also realize that his process of becoming cannot be detrimental to the system of which he is part, whether this be in the intimate marital system or the more global world ecological systems. The Quid-Pro-Quo (Jackson, 1965) is more than a concept of - I'll scratch your back if you'll scratch mine. Instead reciprocity becomes - the more I am the better it is for you and vice-versa.

Shostrom (1974) picking up in the work of Perls (1969), stresses the importance of the individual becoming independent. He departs from Perls in stating that independence is not the goal state; interdependence is the goal state. The idea is that dependent people move to or have the opportunity to become independent. Independent people can choose to be in relationships which are enhancing, but which they do not need in the same way a dependent person needs a relationship. Benjamin Franklin is supposed to have said that the world has not evolved a better system of human relations than the system set forth in the principles of Christianity. A basic Christian tenant is to love your neighbour as yourself. A beginning point then appears to be for a person to develop an appropriate self-love, and this is dependent upon being in transactions with other persons (Rogers, 1961). If someone's self-concept is basically negative, they will not self-disclose appropriately in personal transactions. If there is no self-disclosure then the system is closed because information is not exchanged. The maintenance and enhancement of a self-concept is therefore a beginning point but not the beginning point because a system has no identifiable beginning. Boulding (1956) said that it remains incumbent upon exchange theorists to answer for such examples as love systems to prove that they can be encompassed by exchange theory. A

love system seems to carry the answer in its name. A sense of belonging to, of being in harmony with, is based upon a well liked self which has something to offer to the system. The foundation stone again appears to be that the first responsibility of an individual is to maintain and enhance the self-concept. A person finding that a system aids in the maintenance and enhancement of his self-concept will value that system. Likewise, a person with a healthy regard for himself, should be able to recognize when a system is killing him. The following section examines the developmental approach to marital satisfaction. Successful matching over time as advocated by Foote (1956) would seem more likely in marriages utilizing open system behaviors which lead to the partners perceiving the relationship as profitable.

Matching vs the Myth of Matchmaking

The myth that matchmaking, the selection of the partner, leads to happiness or unhappiness has perpetuated the naturalistic viewpoint of marriage. This viewpoint states that if people select the correct partner and are "in love" the marriage will be a success. If conflict occurs, partners frequently ignore it since this indicates they are no longer "in love" or that they must have selected the wrong partner. Professionals frequently state that in working with marital breakdown they are thwarted by the couple not having come for counseling until the marriage is beyond a reasonable hope of salvation. Others (Vincent, 1973; Mace & Mace, 1974) have advocated marriage enrichment and marital checkups as a different approach to that of the naturalistic viewpoint.

Foote (1956) in an article designed to take some of the emphasis away from mate selection as the principal basis for explaining happy

or unhappy marital outcomes expressed the need for understanding marriage as a developmental process and emphasized the term "interpersonal relations." He also emphasized the personality development of the partners in marriage. In a section headed "Matching vs Match-making," Foote wrote:

Worthy of first note is the assumption that matching is a continual process; a corollary of the assumption that throughout its development the personality of each partner is subject to continuous variation. This assumption is contrary to the familiar hypothesis that whether a marital union is a good match or a poor one, as judged by later outcomes, can be ascertained at the time of marriage. (p. 24)

In the same article Foote deals with divorce as a process of becoming unmatched and suggests that the courtship period be looked at not as an uninvolved shopping process for someone who "fits" best but as a structure for predicting the later marital career. He further suggests for people to enjoy being together when there is no work or purposeful function to perform they must be properly matched and obviously today persons who seem matched for a time do not necessarily remain well matched. He writes of marriage as a pair of "intercontingent careers" and further defines career as the process of orderly development of the person within the context of his relationships over time. Therefore it becomes logical to speak of marriage not as a state but as a pair of careers and a marriage thus conceived may evolve through the enrichment or impoverishment of interpersonal relations over time. As stated by Foote a marriage is not likely to stand still or continue unchanged for very long. Arrest in the development of either partner makes it vulnerable to breakdown. He goes further to state

that the kind of marriage in which stability most depends upon mutual development is on the increase. This fits with the Maces' (1974) work in the promotion of marriage and marriage enrichment. Foote finishes the article with the following quote:

Future studies of marriage, if guided by the interpersonal approach, will not basically correct the imbalance in treatment of masculine and feminine roles by merely shifting attention to the undernoticed adult male, but by analysis of the reciprocal role he plays in his wife's development - or underdevelopment. To repeat, there are marriages in small numbers wherein the wife outgrows the husband, through expanding her interests and activities while he becomes narrow, deformed or arrested -- sometimes despite her efforts to stimulate his social or intellectual growth. And there are also those happy few prototype pairs in which each is successful in facilitating the career of the other. But the commonest picture in American marriage is that in which the husband has no concept whatever of contributing by his manner of speaking and listening to the elaboration of his wife's career, particularly when she has no ostensible professional career. While her constructive achievements with home and children may be honoured, her ventures in other directions appear more often to be subject to insensitive disparagement than to insightful and competent facilitation. If husbands and wives are to become and remain matched in phases of development, therefore, scientific and professional understanding of the processes involved cannot too quickly become disseminated among at least those portions of the population who are demonstrably ready for it. (p.32)

A number of programs have been developed which are endeavoring to disseminate such professional understanding to those portions of the population seeking it. Miller, et al (1975); Mace and Mace (1974), and Branch (1972) are some which have already been mentioned. Otto (1975) has edited a book in which twenty such programs are described.

Such programs in addition to an approach to marriage counseling based on a growth model as espoused by such writers as Satir (1972) and Sutich (1967) might be termed developmental marriage counseling.

Developmental Marriage Counseling

Aiding in the understanding and dissemination of the processes described by Foote would be a function of the developmental marriage and family counselor. Sutich (1967) has described the role of a counselor in relation to the growth centered attitude. His idea states that a counselor is a growth facilitating agent. He writes that:

...a growth-centered individual is one who is not only concerned with adjustment where adjustment is necessary, but is also consciously concerned about liberating, developing, and expressing his productive and creative capacities through progressively achieving new levels of psychological development. (pp. 159-160)

Landsman (1968) has described the "Beautiful and Noble Person" as one who has been created through an accumulation of predominantly positive experiences.

As described above, the ultimate criterion of a happy marriage was the personal happiness of husband and wife with the partners finding satisfaction in loving and being loved, and that the family members should be encouraged by one another to seek personal fulfillment. Rather than have this criterion result in a selfishness which brings about marital dissatisfaction, the counselor could use a continuum such as Landsman (1968) has provided. First, the counselor could help the individuals see the importance of a liked self. It does not do much good to love your neighbor as yourself if you hate yourself.

Second, the counselor can help the partners to understand the

productive aspects of the personality of each other, i.e., their vocations, children, homes, etc.

Third, the counselor can help the family members assume the role of growth facilitating agents for one another by helping the partners to understand that "mature" love as described by Maslow (1967), gives the partner a self rather than forcing him to give up his identity. Frankl (1967) has written that love makes it possible to see the potential self of the loved one. Goethe once wrote that if we treat a man as he is, that is what he would be. If we treat a man as he ought to be, that is what he would become. Buber (1957) states it thusly:

...at all its levels, persons confirm one another in a practical way, to some extent or other, in their personal qualities and capacities, and a society may be termed human in the measure to which its members confirm one another.... The basis of man's life with man is twofold, and it is one- the wish of every man to be confirmed as what he is, even as what he can become, by men; and the innate capacity of man to confirm his fellowmen in this way. That this capacity lies so immeasurably fallow constitutes the real weakness and questionableness of the human race: actual humanity exists only where this capacity unfolds. (pp. 101-102)

As mentioned in the introduction the counselor may also help to dispel the myth of naturalism as pointed out by Vincent (1973). Additionally Watzlawich (1967) has dealt with the importance of a third party when two people in a system get locked into a game which is endless. In the game without end what these patterns have in common is that no change can be generated from within the system; change can only come from stepping out of the system. Since a married couple have difficulty in stepping outside of their system, another possibility according to Watzlawich is a paradigm of psychotherapeutic interven-

tion. In other words the counselor as an outsider is capable of supplying rules that the system itself cannot generate. An example given by Watzlawich is a couple caught up in a game without end: The basic rule of the game was set by the husband's claim of absolute trustworthiness and the wife's absolute acceptance of this self-definition. An irreversible paradox arose in this game when the husband in a moment of frustration promised to be untrustworthy or unfaithful. Obviously this game cannot be ended from within the system and the counselor enters as an enlargement of the system by which it now becomes possible to change the rules.

Another example of a game without end is for two people to start a game of: everything we say we mean the opposite. There is now no way for the participants to stop the game. Mace and Mace (1974) term communication the "Master Key." Previously this writer has referred to the terms feedback, understanding, and systems. All of these are related to communication and especially to the area of communication which may be termed interpersonal perception. TWO-TO-ONE was designed to draw a couple's attention to the importance of accurate interpersonal perception. It has been used as a part of a developmental marriage counseling program. The present study examines the game's effectiveness as a third party in promoting accurate interpersonal perception.

Simulation Games

Osmond (1970) writes that to her knowledge as of 1970, there were no published simulation games aimed at teaching marriage and family living. Several have been developed at this time. Among them are The

Family Contract Game (Blechman, 1974), The Now Communication Game (Otto, 1974), and The Marriage Game (Greenblat, Stein, & Washburne, 1974).

The Family Contract Game is designed to guide family members through basic steps in interpersonal problem solving. It appears to utilize a behavior modification approach to family problem solving.

The Marriage Game is described by the authors as having been designed as a supplement for courses on "Marriage and the Family." They go further to say:

Our experience with simulation games...leads us to believe that players gain heightened interest and motivation and increased cognitive and affective learning about themselves and others. (p. VI)

Fletcher (1971) in writing about simulation games states:

They involve putting somebody into a situation where he must play a role analogous to a certain role in real life and trying to make the actions which he performs similar to the actions that a person in that role would perform in real life. These are much more time consuming to develop, and it is much more difficult to prove that a simulation game is good in the sense that it really is analogous to the real world. (p. 3)

He goes further to say that too many games contain chance variables which complicate feedback. Fletcher is also concerned that most studies are done on participants who have played the game only once. They are studying the effect on the participant while he is learning how to play the game, not the effects of playing.

Another concern of Fletcher's are comparative studies which cite vague references to "traditional teaching," etc. or do not describe

the control at all. He also states that most outcome measures have been given following a posttest game debriefing as to what participants should have learned from the game.

Zelmer (1971) has written of the concept of game literacy.

Fletcher in responding to her concept states:

It strikes me that literacy in gaming has at least three kinds of levels. One level is that you simply might want to learn how to play the game well. The object of improving literacy at this level is simply to learn how to play the game better. A second level that you can approach games at is with the point of view that "I want to learn something about myself from how I behave under certain kinds of circumstances." The camp situation mentioned yesterday was for students who want to put themselves into the position of learning something about themselves. The third kind of learning a simulation game provides, is something that is of use to a person when he goes out into the real world. In this third level, one is looking for an analogy in the real world. (p. 28)

Simulation game literacy at the third level appears most relevant to the present study. McLeish (1970) illustrates simulations designed for third level literacy when he writes:

An illustration of this process can be drawn from dental education, where it is customary to use concrete simulations known as "phantom heads". These are life size replicas of upper and lower jaws. Students carry out particular manual operations on the teeth embedded in the plastic model, learning in this relatively nonthreatening and sheltered situation something of the realities of the dental operating room. In place of phantom heads it has been suggested that the simulation could be removed a stage further from reality - that the same skills could be learned more effectively by a simulation involving "feedback" to the student from a programmed computer. (1970, p. 13)

The initial effort of developing TWO-TO-ONE was primarily trial and error and common sense or lack of it. In 1970 Osmond suggested the following process for game development. Fortunately, these suggestions correspond to procedures which were previously utilized or are currently being utilized in this study.

Osmond Suggestions for Simulation Game Development

1. Determine the appropriateness of a simulation game. Identify your teaching objectives with this in mind, i.e., that you will be constructing a system in which the learner must interact; that the learner must be able to discover the effects of alternative decisions, etc. Decide whether you want to teach a specific concept such as "social role," or whether you want to illustrate the complexity of role obligations, or the interdependence of role relationships in the family.

2. Define the context within which the game is to be used: i.e., what type and number of students; at what age levels; with what requisite capabilities; using what available equipment; in what type of school system or administrative milieu?

3. Designate some initial criterion measures that will give feedback as to whether teaching objectives were actualized.

4. Design a simplified model of the situation or social process to be simulated. Include those elements which are essential to meeting your objectives without including so much that the simulation becomes unwieldy. Stay loose here--many of these variables later may be deleted or altered.

5. Review the literature on the variables and variable relation-

ships contained in the model. Obtain attitudinal as well as statistical data so as to make the model more realistic. Become as familiar as possible with the real-life alternatives in the situation simulated.

6. Place the simulation model within the context of a game. This step involves both the challenge and the fun of simulation gaming. From the writer's experience, drawing up a rough type of flow-chart was invaluable in defining the operations the students would perform. Some of the requisites of a game are as follows:

- a) identification of players or teams
- b) provision to players of some resources (verbal or token) with which to interact or exchange
- c) stating objectives in clear instructions--that is, decision-making tasks, consequent payoffs from alternative choices, and means of evaluation during and after the game.
- d) establishing rules of the game
- e) specification of length of the game--that is, number of rounds, time per round, etc.
- f) post-game discussion or, especially with even a fairly complex situation, discussion after several rounds of the game.

7. Pre-test the simulation game with a small group, not your closest friends but somewhat representative of the target group. Try not to be dismayed at their intellectual denseness in appreciating your efforts, and retreat to modify your model, instructions, or whatever seems the most crucial problem. The usual trouble is that the simula-

tion is either too simple or too complex, or that the game materials need to be made more manageable or more attractive.

8. Field test the simulation to determine if it can be used under operational conditions by members of the target population. At this point, initiate some criterion measures of effectiveness. Unstructured interviews appear to give the most needed information initially, and these subsequently can be replaced with structured questionnaires and actual statistical tests of the students' learning development.

9. Analyze the data (actual scores, attitude scales, or whatever) as to the game's effectiveness as a learning device.

10. Iron out any too obvious "bugs" in the system. Polish the game only where it is unsightly--do leave it open to variation and change. Remember that the very nature of dynamic models, and this seems true especially in marriage and family processes, requires that their analyst constantly reassess and revise his theoretical formulations.

In addition to the development of TWO-TO-ONE according to such suggestions as those just listed, an effort was made to determine the results of playing the game. This study examined the possible effects of play by married couples on such constructs as self-esteem, self-disclosure, and marital satisfaction.

Hypotheses Development

Self-Esteem. Much of accurate interpersonal perception or shared meaning is dependent on the current level of self-esteem (Miller, et al, 1975). Self-esteem may be defined as an individual's perception and

evaluation of his being. Satir (1972) has also pointed to the importance of self-worth (esteem) in effective interpersonal processes. The variable of self-esteem and how it is related to game playing will be further pursued in the present study and is reflected in Hypothesis 1.

Self-Disclosure. Self-disclosure is an appropriate and necessary behavior when a shared meaning is desired. Self-disclosure is defined as the revealing of one's thoughts, feelings, and intentions which might facilitate the understanding of one's behavior by another. The present study focuses on self-disclosure between married partners. Lewis (1972) and Branch (1973) have developed models which emphasize the importance of self-disclosure to the ongoing process of couple development. The present study investigates the variable of self-disclosure and how it is related to game playing. This is reflected in Hypotheses 2 and 4.

Perceived Loving Behavior. Loving behavior is defined as verbal and non-verbal behaviors which demonstrate caring. The assumption behind this variable is that a relationship with high scores on the variable would be judged as more valuable than a relationship with low scores. Thibaut and Kelley (1959) have shown that this is not necessarily so. They point out that the comparison level for alternatives can be a contaminating factor as mentioned earlier. Hypothesis 3 investigates the variable of loving behavior and how it is related to game playing.

Marital Satisfaction. Earlier Sirjamaki (1948) was referred to as having stated that marriage is judged by the personal fulfillment of the husband and the personal fulfillment of the wife with each

finding satisfaction in loving and being loved. Burr (1973) also defined marital satisfaction as "...the degree to which the desires of individuals are fulfilled." In his chapter on marital satisfaction he stated that various terms such as adjustment, success and stability have been used with slightly different connotations. He further stated that the concept of marital satisfaction may be conceptualized either as satisfaction with the marriage as a whole, which would be marital satisfaction or as satisfaction with specific aspects of the marriage situations such as satisfaction with sex or satisfaction with companionship. The relationship between marital satisfaction and game playing was pursued in the present study as reflected in Hypothesis 5.

In the present study, the efficacy of TWO-TO-ONE was investigated by comparing it with two alternative treatments and a control in relation to the following hypotheses.

Hypotheses

Null Hypothesis 1.1: For the variable of self-esteem, the population means for husbands and wives were equal.

Hypothesis 1.1 Alternative: The null hypothesis was not true.

Null Hypothesis 1.2: For the variable of self-esteem, there was no difference according to sex.

Hypothesis 1.2 Alternative: The null hypothesis was not true.

Null Hypothesis 1.3: For the variable of self-esteem, there was no interaction between sex and treatments.

Hypothesis 1.3 Alternative: The null hypothesis was not true.

Corresponding hypotheses were also set up for each of the other four variables and examined through two-way analysis of variance.

CHAPTER III

Method

Subjects

The sample for the present study was drawn from a population of four hundred thirty eight individuals comprising two hundred nineteen couples. The Edmonton General Hospital, the Misericordia Hospital, and the LaMaze Prenatal group in Edmonton referred names of couples having attended at least one pre-natal class as a couple during the first pregnancy and within the year previous to the study. Age of participants was unfortunately omitted on the personal data sheets obtained from the hospitals. Most subjects were judged to be in their middle twenties.

Subjects agreeing to participate were told that an explanation of the study would be given when the study was completed. Seventy individuals (thirty-five couples) completed the required number of games played and returned to be tested. Twenty-six individuals (thirteen couples) kept their appointments for testing as members of the control group. Table 1 shows the number of individuals that actually began the study, the number that completed the study, and the percentage represented by those completing the study. Couples contacted as to why they did not follow through on their commitment to participate responded with statements similar to the following:

"We could not get a babysitter."

"We forgot."

"My husband changed his mind."

Couples contacted who began the study but did not return for testing gave explanations similar to the following:

- "We do not see what playing checkers has to do with anything."
- "The baby has been sick."
- "My husband was called out of town."
- "We have been too busy."

Table 1
Couples Beginning and Ending Study

	Number of Couples That Began Study in Each Group	Number of Couples That Completed Study	Percentage
T ₁	18	14	77%
T ₂	14	10	71%
T ₃	15	11	73%
Control		13	

The sample consisted of ninety-six individuals comprising forty-eight couples.

Instrumentation

Those couples returning to complete the study and the control group were administered paper and pencil instruments to measure self-esteem, perceived self-disclosure, perceived loving behavior, and marital satisfaction.

Self-Esteem. For the purposes of this study self-esteem was defined as that which is measured by the "total P score" of the Tennessee Self-Concept Scale. The Tennessee Self-Concept Scale (Fitts, 1964) is a self-report inventory, and is reported to have test-retest reliability coefficients ranging from .60 to .92. Two studies have been done which indicate the items of the Tennessee Self-Concept Scale have construct validity (Vacchiano and Strauss, 1968; Vincent, 1968). Another study indicates that a response set may effect scores on the sub-scales (Greenberg and Frank, 1965). The present study should not be affected as only the "total P score" which measures overall level of self-esteem was utilized. The test consists of one hundred items and requires a completion time of about 20 minutes.

Perceived Self-Disclosure. For the purposes of this study perceived self-disclosure was defined as that which is measured by the total score of the Self-Disclosure Questionnaire of Miller, Nunnally, and Wackman. The Self-Disclosure Questionnaire developed by Miller, Nunnally, and Wackman at Minnesota has been selected because its items are designed to measure self-disclosure in a marital dyad. The test consists of twenty items with internal consistency reliability scores reported as being around .90.

Perceived Loving Behavior. For the purposes of this study, perceived loving behavior was defined as that which is measured by the total score on the Loving Behavior Inventory. The Loving Behavior Inventory is an instrument developed by this writer to look at perceived frequency of those behaviors performed by members of a marital dyad which are assumed to be loving behaviors. In a previous

study (Pashelka) this test was correlated with individual's pre- and post-test scores of anomia and alienation. The Loving Behavior Inventory correlated with low alienation or anomia scores .66 on a pre-test and .73 following treatment. It correlates .67 with the Rythmic Relationship score of the Pair Attraction Inventory (Shostrom, 1971). In a pilot study (Branch, 1974) the Loving Behavior Inventory correlated with the total "P" score of the Tennessee Self-Concept Scale .44 and with the Self-Disclosure Questionnaire .67. The Loving Behavior Inventory consists of 24 items. Factor analysis of the Loving Behavior Inventory indicates a principal factor which may be termed loving behavior. This factor is primarily composed of two components - loving sexual behaviors and loving verbal behaviors.

Marital Satisfaction. For the purposes of this study, marital satisfaction was defined as that which is measured by the total score on the Locke Marital Adjustment Questionnaire. The Locke Marital Adjustment Questionnaire Modified Form (Kimmel and van der Veen, 1974) was chosen because of the factor analytic study reporting it to be an internally consistent measure of marital adjustment consisting of two components - sexual congeniality and compatibility. Factor scores for each factor were found stable over a two year test-retest interval. Locke (1959) reports his instrument to have predictive validity. Kieren's & Tallman's (1972) findings appear to question at least a part of the Locke-Wallace (a shortened form of the Locke) instrument's validity in that her findings report the recognition of problems as a necessary condition for problem solving, whereas on instruments such as the Locke-Wallace the recognition that problems exist is viewed as indicative of marital difficulty. The Locke Marital Adjustment Questionnaire or the Locke-Wallace is probably the most widely used

instrument in studies of marital satisfaction which accounts for its inclusion in the present study.

In order to obtain a behavioral measure of self-disclosures on a relationship issue, a sample of five couples from each group was randomly selected. Each of these couples was tape-recorded in a five minute transaction on the topic: "Something which you think if changed would improve your relationship."

This tape was transcribed and rated as to number of self disclosing statements. Such a rating process of transcribed data was utilized by Miller (1971). Material describing self-disclosing statements is covered in the Minnesota Couples Communication Handbook (Miller, et al, 1972, pp. 23-31).

In transcribing the tapes it was discovered that some of the tapes were unusable. A citizens band radio transmitter was picked up over the voices of some subjects. Five tapes were useable from the experimental group and four each from the other groups.

A rater trained in the recognition of self-disclosing statements was used in rating the transcripts. Two additional raters similarly trained independently rated five couples' transactions. The raters were not aware to which group the couples belonged.

Two way analysis of variance was used to determine differences among the groups on the scores of the Loving Behavior Inventory, the Tennessee Self-Concept Scale, the Self-Disclosure Questionnaire, and the modified form of the Locke Marital Adjustment Questionnaire. A separate two way analysis of variance was used to determine differences among the groups from the rated tape-recorded transactions of the smaller sample.

Development and Description of Two-to-One

In 1968 this author undertook the development of programs designed to promote understanding and validating between married partners. One such program was a marriage enrichment program requiring couples to participate with five to six other couples for six sessions of approximately two hours each. This program evolved from a similar program developed by Clarke (1970) and made available to this writer. The sessions were designed to facilitate the recognition and expression of positive feelings related to self, other, and relationship. This program has recently been evaluated by a masters student at the University of Alberta who found significant positive changes from pre- to post-test for a sample of nine couples participating in the program (Anderson). The first session of this series utilizes TWO-TO-ONE in order to facilitate interpersonal perception of feeling between the partners. In a paper presented to the National Council on Family Relation Theory Construction Workshop, Larson (1974) states the following regarding the importance of interpersonal perception:

...it would seem likely that the fact of disagreement is essentially useless information without ascertaining whether this fact is known by one or more family members. Theory which focuses on the convergence and equilibrium of families toward greater agreement has missed the point. The point would seem better stated as coming to know, understand and feel understood relative to the existence of disagreements. Second, it should not be assumed that the fact of disagreement is inherently a negative feature of family relationships...serious disagreements - those that threaten the stability of the unit - will likely dissipate with time and

communication. Other disagreements, however, will provide the cutting edge for change, evolution (negentropy or morphogenic processes in open systems theory), optimum toleration, and a little dynamic and challenging interaction (e.g., bargaining and exchange). (pp. 5-6)

The importance of multiple level perceptions to interpersonal relations is covered by Laing, Phillipson, and Lee (1966) and is illustrated by Larson (1974) with the following quote from Schelling:

If the Yalu River is to be viewed as a limit in the Korean War that was recognized on both sides, its force and authority is to be analysed not in terms of the joint unilateral recognition of it by both sides of the conflict...but as something mutually recognized. It was not just that we recognized it and they recognized it (LEVEL I PERCEPTION), but that we recognized that they recognized it, they recognized that we recognized it (LEVEL II PERCEPTION), we recognized that they recognized that we recognized it (LEVEL III PERCEPTION. (1974, p. 2)

TWO-TO-ONE is designed to facilitate understanding of married persons' perceptions of one another, not necessarily agreement with one another's perceptions. TWO-TO-ONE in the playing and discussion incorporates the three multiple levels of perception. Jourard (1968), Murstein (1971), and Lewis (1972) emphasize the importance of communication in knowing the views, attitudes, perceptions, etc. of one's partner. In fact, Jourard defines self-disclosure as the revealing of one's thoughts, feelings, and wants to another. Carkhuff (1969) as well as others have defined empathy as the ability not only to understand another but to verbally communicate that understanding.

Sullivan (1953) described the self as the product of a process of attribution of identity by significant others. Since people are inconsistent in their ability to relate positively with others, the

self-concept is always in a state of flux and the person in a need to validate his identity. Thus the enhancement of the self-concept is a cooperative process though not always consistent. In interpersonal relations, persons vary in their ability to facilitate one another's growth. Lewis (1972), Satir (1964), and Branch (1974) use the term validation as it was used by Sullivan. To this writer the term validation is nearly synonymous with level three perception, i.e., one knows that he is seen by another in the manner he thinks he is seen by the other.

TWO-TO-ONE tends to reverse the normal order of communication. The normal order would generally be that person A makes a disclosure followed by person B making a response (hopefully one of understanding) which would tend to lead to further disclosures by person A. In playing TWO-TO-ONE, person B in the above illustration begins by making a guess of a communication of understanding followed by person A making a self-disclosure which would then yield new disclosures by persons A and B in discussing their responses. By stating the situation as being a game it is safer for someone to guess at how they think another may be feeling and likewise it is safe for person A to respond, "Yes, that's how I feel." or "No, that's not how I would feel." In other words, the game becomes Watzlawich's third party mentioned above. The rules of the game are a meta-rule for the couple. Included in the instructions of TWO-TO-ONE is the instruction that understanding and not agreement is what is important.

TWO-TO-ONE is played with the aid of a game board, situation cards, personal viewpoint cards, and discs for marking personal view-

points on the game board. Following the convention as outlined above, person B begins the game by drawing a situation card. The situation card may outline such situations as:

You (person B) forgot to mail payment for electric bill. Guests are expected for dinner the afternoon on which the power is turned off. Or, you have reason to believe that your method of birth control has gone awry.

Person B then draws four personal viewpoint cards which are made up of feeling words; next, he arranges these words: Most True, True, A Little True, and Least True as to how he (person B) thinks person A would be feeling in the particular situation described by the situation card. Person B then shuffles the four personal viewpoint cards, gives them to person A who arranges them as to how he thinks he would actually feel in the situation described. Both players mark their choices with the discs upon the playing board. The players then reveal their perceptions to one another and discuss how they made their decisions. Should no match occur, person B draws a consequence card, which may state such consequences as:

Write one sentence love notes and leave them where your partner will find them during the next two days. Or, you owe your partner one loving massage.

The number of matches are marked on the score sheet and person B now becomes person A and person A becomes person B for the next round. The game continues for five rounds.

TWO-to-ONE is designed to promote a sense of validation in the participants from the experiences of congruence when one's feelings are

matched exactly by another and when misunderstanding has occurred from the effort made by the partners of "talking through" until understanding is achieved.

The NOW COMMUNICATION GAME (Otto, 1974) is a recent publication and was selected as a comparison treatment in the present study. It was designed for couples by a leader in the field of marriage enrichment and includes the following statements which may be interpreted as objectives:

1. Enriches relationships.
2. Fosters better communication.
3. Develops increased understanding, loving and caring.
4. Results in greater enjoyment and appreciation of each other.

These objectives appear very similar to the objectives of TWO-TO-ONE. However, this writer suspects that TWO-TO-ONE will better accomplish the objectives than the NOW COMMUNICATION GAME for the following reasons:

1. TWO-TO-ONE requires a definite commitment of time to play. The NOW COMMUNICATION GAME can be played incidentally.
2. TWO-TO-ONE structures the interaction in that partners state how they think the other is feeling and then ask for feedback as to accuracy. The NOW COMMUNICATION GAME instructs the players to make a disclosure. This does not seem as skill oriented as TWO-TO-ONE.
3. TWO-TO-ONE structures the carrying out of certain loving behaviors. This should help in bridging the gap between learning and performance.

TWO-TO-ONE is designed to facilitate multiple level perceptions between partners, to aid in the recognition of erroneous perceptions and to accomplish this in a facilitative and non-threatening manner. Hopefully, such a treatment will result in the couple recognizing that difficulties in interpersonal relations evolve more from the interaction than the participants.

Procedures

The first step in the present study was the development of TWO-TO-ONE focusing on the objectives given in Chapter one. Next, a formative evaluation was undertaken for ascertaining successes and failures in meeting these objectives and for identifying areas where revisions would be advisable (Osmond, 1970; Scriven, 1972). Two checklists (Appendices I and II) were used. Checklist one was completed by participants in the three treatment groups following the playing of a game. As suggested by Scriven, checklist two was completed by external judges. The judges were counseling psychologists and family life educators known to be involved with the field of marriage enrichment. The list of judges of whom requests were made was comprised of five family life educators. Three hold doctorates and the other two master's degrees. The remainder of the list consisted of three counseling psychologists who hold doctorates.

The experimental portion of the study consisted of a research design examining relationships associated with playing TWO-TO-ONE.

The design for the outcome portion of the study was a post-test only design with three groups receiving experimental treatments, and a control group. The NOW COMMUNICATION GAME (Otto, 1974) was included

as an additional experimental treatment in order to rule out the effects related to performing a similar activity. A group requested to play CHECKERS or SCRABBLE was included to rule out the effects related to spending similar time together.

Since the Loving Behavior Inventory, the Locke Marital Adjustment Questionnaire, and the Self-Disclosure Questionnaire tend to suggest behaviors to persons completing them, (Appendices IV, V, and VI) they would probably be judged as having a treatment effect if given as a pre-test, the post-test-only was chosen as being especially appropriate for this study. Randomization of subjects into groups was possible which makes this a true experimental design (Campbell and Stanley, 1963).

To begin the experimental portion of the study, the names of two hundred nineteen couples were randomly assigned to groups and then a letter (Appendix VII) was mailed requesting their participation. In a telephone follow-up, those couples agreeing to participate were given group appointments for receiving materials and instructions.

Couples in each treatment group received instructions in playing the game which they received, were requested to play it a minimum of five times over two weeks, were requested to separately fill out a questionnaire as shown in Appendix I following each playing, and were given an appointment time for testing.

The control group couples were contacted by phone and given appointments for testing. Testing times were the same as testing times for the other three groups.

As a checking procedure, couples were contacted by phone after one half of the treatment period had elapsed. At that time they were encouraged to complete the minimum five times of playing a game. They were also reminded of their appointment time for "filling out forms at our office in order to complete the study."

Two way analysis of variance was used to determine differences among the group means on each variable: of the Loving Behavior Inventory, the Self-Disclosure Questionnaire, the modified form of the Locke Marital Adjustment Questionnaire, and the rated tape-recorded transactions of the smaller sample.

CHAPTER IV

Results From Formative Evaluation

As previously explained, the formative component of the study consisted of evaluations by participants and evaluations by professionals in the areas of Counseling and Family Life Education. The purpose of this portion of the study was to discover deficiencies and successes in relation to the items which promote understanding, enjoyment, and benefit to relationships. Appendices I, II, III illustrate the forms used for these evaluations. Items five, six, and eight (Appendix I) are related to understanding.

Item five was worded to ask if playing the game was helpful in better understanding one's partner. Husbands responded in the direction of yes, definitely 55% of the times they completed the forms; wives responded in the direction of yes, definitely 64% of those times.

Item six was worded to ask if participants think that people in love naturally understand one another. Husbands marked this item in the direction of disagree 74% of the times they completed the forms; wives responded in the direction of disagree 71% of those times.

Item eight requested participants to rate their efforts at obtaining understanding compared to their efforts at obtaining agreement. Husbands marked this item in the direction of understanding 71% of the times they completed the forms; wives responded in the same direction 96% of those times. The overall percentage of responses in the expected direction on items related to understanding was 71%.

Items one, three and nine (Appendix I) are related to enjoyment. Item one was worded so as to receive a rating of how participants were feeling while playing TWO-TO-ONE. Husbands responded in the direction of happy 69% of the times they completed the forms; wives responded in the direction of happy 74% of those times.

Item three was worded to obtain participants' ratings of TWO-TO-ONE compared with watching television or going to a movie. Husbands responded in favor of TWO-TO-ONE 61% of the times they completed the forms; wives on the other hand responded in favor of TWO-TO-ONE only 46% of those times.

Item nine was worded to obtain a rating as to whether play was dull or stimulating. Husbands rated play as stimulating 59% of the times played; wives rated play as stimulating 61% of those times. The overall percentage of responses in the expected direction on items related to enjoyment was 62%.

This objective was not as clearly met as was the understanding objective. This may be explained by recalling that participants were instructed to play the game a minimum of five times during the two weeks of the study. Being allowed to play when one desires to play instead of when one must could have a different effect on enjoyment. It is interesting to note that item three, relating to watching TV or going to a movie, received different ratings by husbands and wives. Wives reported that watching TV or going to a movie would have been equally as stimulating; while husbands reported playing TWO-TO-ONE as more stimulating. This might be explained by the wives all having young babies and most likely being eager to get out of the house. Husbands on the other hand have been out at work and would most

likely be content to stay home.

Items two and four illustrated in Appendix I are related to participants' perceptions of possible benefit to relationship from playing TWO-TO-ONE.

Item two was worded to request ratings as to whether TWO-TO-ONE was perceived as helpful in promoting discussion of situations important to the relationship. Husbands marked this item in the direction of yes, definitely 52% of the times they completed the forms; wives responded in the direction of yes, definitely 53% of those times.

Item four was worded to obtain the players' perceptions as to whether playing TWO-TO-ONE could possibly prevent a future argument. Husbands marked this item in the direction of yes, definitely 46% of the times they completed the forms; wives responded in the same direction 45% of those times. The overall percentage of responses in the expected direction on items related to perception by participants of possible benefit to relationship was 50%. This finding is difficult to explain. Possibly the game is viewed only as a game by participants without extrapolations to "real" life. Possibly participants were sophisticated enough to view playing TWO-TO-ONE as a means of opening up disagreement areas for argument. Kieren and Tallman (1972), Larson (1974), and Miller et al (1975) have shown how such disagreement may be constructive for a marriage.

Item seven was worded to establish whether or not TWO-TO-ONE promoted competition between participants. Husbands responded not particularly 78% of the times they completed the forms; wives responded not particularly 73% of those times. The overall percentage was 75%. TWO-TO-ONE apparently did not promote competition between partners.

None of the above percentages were significantly different for husbands and wives.

Four forms of the eight requests made of professionals in the field of counseling and/or Marriage and Family were returned. This portion of the study gives TWO-TO-ONE a high rating in that it was consistently judged to emphasize the variables for which it was designed. On a four point scale, it received all threes and fours. Appendix II contains the form used. The statement, "I would/would not recommend TWO-TO-ONE as homework or a supplement for counseling," was consistently marked "would." Comments included were:

Perhaps painful in beginning but possibly helpful in the long term process.

Items or issues could be changed (this was seen as a strength in relation to directions for play).

Could be very useful.

I think this would be useful for couples having some difficulty.

When the participants finished the study, they completed an evaluation of the principal components of TWO-TO-ONE. The situation cards were evaluated as follows: Interesting = 89%, Relevant = 70%, Fun Producing = 82%.

The personal viewpoint cards were evaluated as appropriate to most situations only 30%. This nature of response was expected as similar feedback had been received from others who had played the game. Some revision to the personal viewpoint cards is definitely indicated.

The consequence cards received only a 41% rating as an exciting part of the game. This finding was unexpected as previous participants

had ranked them very high. On checking comments it was found that directions were not followed in the use of consequence cards. This could explain the low rating. This finding indicates a need for revisions in the directions given for playing. The Perceptual Congruence Chart received a positive rating of 73% in being rated as a fun way to keep score.

An additional comment heard from participants following the study was that playing TWO-TO-ONE was very enjoyable the first few times, and then it became boring. They were looking forward, however, to using it with a group of friends. Possibly, the format of the study which required a number of games to be played in a two week period led to such a loss of interest. Most likely, the game has its best effects in the first few playings. These are the times when couples report surprise at discovering that they did not know how their partner felt in a particular situation.

The formative component of the present study was helpful in evaluating TWO-TO-ONE. The forms completed by participants and those completed by experts tended to test the validity of the game as well as discover successes and shortcomings in its design.

CHAPTER V

Results of the Experimental Evaluation

Analysis of the data for the variables of self-esteem, perceived self-disclosure, and perceived loving behavior failed to indicate differences between the groups. On the variable of marital satisfaction and the behavioral variable of rated self-disclosure some support was indicated for the TWO-TO-ONE treatment. The details are given below.

Self-Esteem. Hypotheses 1.1, 1.2, and 1.3 were set up to examine respectively, groups, sex, and interaction effects in regard to self-esteem as measured by the Tennessee Self Concept Scale. The means and variances obtained on the variable are given in Table 2. Table 3 gives results from two-way analysis of variance. As can be seen from the latter, the data failed to reject any of the three null hypotheses.

Perceived Self-Disclosure. Hypotheses 2.1, 2.2, and 2.3 were set up to examine groups, sex, and interaction effects respectively in regard to perceived self-disclosure as measured by the Self-Disclosure Questionnaire. The means and variances on the variable are given in Table 4. Table 5 gives results from two-way analysis of variance. As can be seen from Table 5, null hypothesis 2.2 was rejected. Wives scored significantly higher than husbands on the variable of perceived self-disclosure. Data failed to reject either of the other null hypotheses.

Perceived Loving Behavior. Hypotheses 3.1, 3.2, and 3.3 were set up to examine respectively groups, sex, and interaction effects in regard to perceived loving behavior as measured by the Loving Behavior

Table 2
Self-Esteem Means and Variances
Classified by Sex and Treatment

		<u>Treatments</u>			
		T ₁	T ₂	T ₃	Control
Husbands	Means	339.57	342.70	356.00	346.85
	Variances	3159.69	1080.11	906.00	1109.25
Wives	Means	345.64	339.29	361.27	337.77
	Variances	1036.30	939.44	505.09	1682.08

Table 3
Results From Self-Esteem
Using Two-Way Anova

Source	MS	D.F.	F	P
Sex	-3.44	1	-.003	.*
Treatment	1562.18	3	1.14	.34
Sex x Treatment	334.48	3	.25	.87
Error	1367.40	88		

* Means for husbands and wives were virtually identical.

Table 4
Perceived Self-Disclosure Means and Variances
Classified by Sex and Treatment

		<u>Treatments</u>			
		T ₁	T ₂	T ₃	Control
Husbands	Means	92.79	85.09	86.00	93.15
	Variances	202.18	455.66	171.20	401.81
Wives	Means	99.14	96.09	107.18	97.63
	Variances	159.36	423.21	152.77	213.77

Table 5
Results From Perceived Self-Disclosure
Using Two-Way Anova

Source	MS	D.F.	F	P
Sex	2490.74	1	9.43	.003
Treatment	156.33	3	.59	.62
Sex x Treatment	329.90	3	1.25	.30
Error	264.05	88		

Inventory. The means and variances on the variable are given in Table 6. Table 7 gives results from two-way analysis of variance. As can be seen from the latter, there was a tendency in the direction of wives scoring higher on this variable. If one were to use .08 as level of significance, null hypothesis 3.2 would be rejected. However, data clearly failed to reject either of the remaining two null hypotheses.

Rated Self-Disclosure. Hypotheses 4.1, 4.2, and 4.3 were set up to examine respectively group, sex, and interaction effects in regard to rated self-disclosure as measured by rated tape-recordings. The means and variances are given in Table 8. Table 9 gives results from two-way analysis of variance. As can be seen from the latter, data failed to reject any of the three null hypotheses. Some tendency was noted, however, in favor of the TWO-TO-ONE treatment. It will be recalled that the measures on other variables were obtained indirectly through paper-and-pencil approach. Those for this variable, on the other hand, were ratings of tape-recorded behaviors by trained observers and the former had high agreement as is evident from Tables 10A and 10B. As such, this tendency is of special interest.

Marital Satisfaction. Hypotheses 5.1, 5.2, and 5.3 were set up to examine respectively group, sex, and interaction effects in regard to marital satisfaction as measured by the Locke Marital Adjustment Questionnaire (modified form). The means and variances on the variable are given in Table 11. Table 12 gives results from two-way analysis of variances from which treatment difference is obvious, leading to rejection of hypothesis 5.1. Table 13 gives results from Scheffe's aposteriori contrasts. The Newman-Keuls method (not reported here) was also utilized for this purpose. It gave the same

Table 6
Perceived Loving Behavior Means and Variances
Classified by Sex and Treatment

		<u>Treatments</u>			
		T ₁	T ₂	T ₃	Control
Husbands	Means	123.00	120.40	127.55	128.46
	Variances	162.76	324.27	190.47	160.10
Wives	Means	129.71	125.80	135.72	129.92
	Variances	241.29	428.18	199.41	86.07

Table 7
Results From Perceived Loving Behavior
Using Two-Way Anova

Source	MS	D.F.	F	P
Sex	688.57	1	3.21	.08
Treatment	290.52	3	1.35	.26
Sex x Treatment	51.80	3	.24	.87
Error	214.53	88		

Table 8
 Rated Self-Disclosure Means and Variances
 Classified by Sex and Treatment

		<u>Treatments</u>			
		T ₁	T ₂	T ₃	Control
Husbands	Means	11.20	6.50	5.50	5.50
	Variances	61.70	14.33	9.66	46.33
Wives	Means	12.00	9.00	7.00	6.75
	Variances	25.50	42.00	4.66	10.91

Table 9
Results From Rated Self-Disclosure
Using Two-Way Anova

Source	MS	D.F.	F	P
Sex	18.38	1	.65	.42
Treatment	60.66	3	2.15	.12
Sex x Treatment	1.11	3	.04	.99
Error	28.17	26		

Table 10A
Compared Ratings of Self-Disclosures
For Husbands

	Rater 1	Rater 2	Rater 3
Husband 1	12	13	12
Husband 2	4	4	5
Husband 3	0	0	1
Husband 4	7	8	6
Husband 5	14	13	12
Total	37	38	36

Table 10B
Compared Ratings of Self-Disclosures
For Wives

	Rater 1	Rater 2	Rater 3
Wife 1	18	15	16
Wife 2	6	4	6
Wife 3	3	4	2
Wife 4	6	7	6
Wife 5	10	12	11
Total	43	41	41

Table 11
Marital Satisfaction Means and Variances
Classified by Sex and Treatment

		<u>Treatments</u>			
		T ₁	T ₂	T ₃	Control
Husbands	Means	117.50	111.30	109.27	106.62
	Variances	76.12	133.79	180.22	188.59
Wives	Means	115.00	111.40	116.27	107.84
	Variances	69.53	178.04	98.61	132.47

Table 12
Results From Marital Satisfaction
Using Two-Way Anova

Source	MS	D.F.	F	P
Sex	36.11	1	.28	.60
Treatment	373.03	3	2.89	.04
Sex x Treatment	95.62	3	.74	.53
Error	128.88	88		

Table 13
 Probability Matrix for Scheffe on Marital Satisfaction
 Using One-Way Anova

	<u>Multiple Comparison of Means</u>			
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>
T_1	1.0000	0.5330	0.7593	0.0400
T_2	0.5330	1.0000	0.9826	0.6803
T_3	0.7593	0.9826	1.0000	0.4141
Control	0.0400	0.6803	0.4141	1.0000

results. Looking simultaneously at Tables 11 and 13, it is evident that the mean from TWO-TO-ONE treatment was significantly higher than that from the control group--the same did not hold true for treatments T_2 and T_3 .

CHAPTER VI

Discussion

The purpose of the present study has been stated as being the formative and experimental evaluation of TWO-TO-ONE, a simulation game of marital communication. The results have been given in Chapters IV and V. Here they are discussed in some detail and their implications indicated.

Formative

The formative evaluation was useful in assessing how the game was perceived by players and experts in areas related to the specific objectives.

Specific objective (a) was:

INCREASED UNDERSTANDING BY INCREASING SELF-DISCLOSURES

As reported in the results, TWO-TO-ONE received a reasonably high rating (70%) on items related to this objective. Also, it was seen that the experts rated the game as emphasizing understanding.

Earlier it was stated that a viable relationship is dependent on adaptability (Kieren, 1972) or role-making (Aldous, 1974) which are, in turn, dependent on understanding (Larsen, 1974; Miller et al, 1975). TWO-TO-ONE appears to be seen by players and experts alike as a useful tool in the development of understanding between marital partners.

Specific objective (b) which looked at increased self-esteem and loving behaviors was evaluated experimentally and the results are given in the next section.

Specific objective (c) was:

INCREASED PLAYTIME AS A COUPLE BY BEING ENJOYABLE TO PLAY

TWO-TO-ONE was rated by the players as a game which, while playing, they tended to feel happy and stimulated. This was especially true for the first few playings. The overall rating on this item was 62%.

Specific objectives (d) and (e) were:

INCREASED OPPORTUNITY TO TALK ABOUT SITUATIONS WHICH MIGHT OCCUR IN A MARRIAGE PRIOR TO THEIR ACTUAL OCCURRENCE.

INCREASED OPPORTUNITY TO CONFRONT UNRESOLVED ISSUES WHICH HAVE PREVIOUSLY OCCURRED.

Participants did not see TWO-TO-ONE as being particularly helpful in promoting discussion of issues or in preventing future arguments. The overall rating on items related to these objectives was 50%. On the other hand, experts reported seeing the game as (1) emphasizing potential situations related to conflict areas in marriage, (2) beneficial to normal couples and couples having difficulties. Therefore, they indicated willingness to recommend it for homework.

Specific objective (f) was:

INCREASED RECOGNITION BY THE COUPLE OF THE DANGER OF THINKING NATURALISTICALLY--i.e., BELIEVING THAT IF THEY ARE IN LOVE, NO SKILLS ARE NECESSARY IN UNDERSTANDING ONE ANOTHER'S THOUGHTS, FEELINGS, AND INTENTIONS.

Seventy-three percent of the times participants marked item six of Appendix I; they reported that they did not believe they should just naturally understand one another.

An additional item was included to establish whether TWO-TO-ONE

was seen by participants as promoting competition. Seventy-five percent reported to the contrary.

Two areas indicating a need for revision were discovered in the final evaluation. The personal viewpoint cards were seen as difficult to apply in some situations. A revision of the personal viewpoint cards is planned for the near future.

The consequence cards having been evaluated as something the game could have done without was unexpected as they had been talked about by many users of TWO-TO-ONE as their favorite part of the game. Upon checking with participants, they reported that according to the directions for playing, the consequence cards were unnecessary. The directions for playing state that players are to draw a consequence card if they miss on all four chances of guessing the partner's feelings. As some participants never missed on all four chances, they never used the consequence cards and therefore marked them as something the game could have done without. The directions for playing have been revised as a consequence. The current directions indicate that partners should decide how many misses would indicate that a consequence card should be drawn.

Significant differences were not found on any of the variables using the NOW COMMUNICATION GAME. After talking with participants of the experimental group, it is the opinion of this writer that some participants may not have played the games conscientiously. They may have briefly talked about the game and filled out the forms without really playing. As predicted in Chapter II, TWO-TO-ONE would tend to be less susceptible to such behavior as it requires a definite

commitment of time to play. A strength of the NOW COMMUNICATION GAME is that it may be participated in almost incidentally while performing other activities. This particular strength may have been a handicap in the design of the present study. A study designed to control or monitor the actual playing of games might lead to better results for both games.

One outcome from the evaluative portion of the study, however, suggested that playing TWO-TO-ONE a required number of times in a short period may become boring. In the design of the present study, one does not know whether five times in two weeks was too much or whether some participants tended to play the required five times in a shorter time period. People who have the game and can play it when they choose may have a different experience.

The use of TWO-TO-ONE in the first session of a marriage enrichment program (Branch, 1972) indicated it to be a useful tool for introducing couples to group experiences. Feedback from persons whom have played TWO-TO-ONE at parties indicated its usefulness as a means of introducing new areas for conversation. It also encouraged interaction as couples instead of the frequent groupings of men and women.

Experimental

The data failed to lead to the rejection of most of the null hypotheses. There were two exceptions, however. They were:

1. TWO-TO-ONE gave significantly larger means in comparison to the variable of marital satisfaction. Although both Scheffe's and Newman-Keul's methods indicated that the difference did not hold true for treatments T_2 and T_3 , this finding appears especially significant

in the light of the population sampled. It seems reasonable to assume that most couples who attended a pre-natal class together would already be high in marital satisfaction.

2. Wives had significantly larger means than husbands on the variable of perceived self-disclosure. Additionally, there was a tendency for wives to score higher than husbands on the variable of perceived loving behavior.

Professionals reported that they would recommend TWO-TO-ONE as homework for couples they were seeing in counseling. Their judgments that TWO-TO-ONE would be beneficial to couples experiencing difficulties, as well as those normally functioning adds to the above in judging TWO-TO-ONE as a useful aid to marital satisfaction.

Miller, et al (1975) have shown how self-disclosure is related to functional communication in marriage. Further support for the TWO-TO-ONE treatment was indicated on the variable of rated self-disclosure. While not showing statistical significance ($P < .12$), the ordering of means according to treatments and the difference in the means as shown in Table 8 on page 50 add weight to the usefulness of TWO-TO-ONE as an aid to self-disclosure.

The tape-recording of actual self-disclosing behaviors was a useful procedure in the present study. However, upon examining the statements rated as self-disclosing, this writer would judge them as rather rudimentary self-disclosing statements. They do not appear to be as complete as needed for effective communication. A marriage enrichment program (Branch, 1972) or the Couples Communication Program (Miller, et al, 1975) would seem to be more efficacious in regard to self-disclosure.

As far as treatment differences are concerned, some comment seems warranted concerning the lack of findings on the variables of self-esteem, perceived self-disclosures, and perceived loving behaviors. In a pilot study (Branch, 1974), self-esteem was found to be significantly related to perceived self-disclosures and perceived loving behaviors. In that study, persons higher and lower in self-esteem were compared. The high self-esteem group was significantly different from the low group on the perceived self-disclosure variable, $p = < .01$, and on the variable of perceived loving behavior, $p = < .008$.

In the present study, the CHECKERS or SCRABBLE group scored numerically higher on self-esteem than did the other groups. The CHECKERS or SCRABBLE group was also consistently higher on the other variables. The TWO-TO-ONE group and the control group have virtually identical self-esteem mean scores and fall in-between the other two groups on scores of perceived loving behaviors and perceived self-disclosures.

The lack of findings regarding the variables of self-esteem, perceived self-disclosures, and perceived loving behaviors may be due to high correlations between the variables. Most likely, playing CHECKERS or SCRABBLE did not relate to improvement in the scores on these three variables.

One additional comment should probably be made in regard to the findings related to the significant differences between husbands' and wives' mean scores on the variable of perceived self-disclosure. This was not a surprising finding as the literature has consistently reported wives to be more expressive (Foote, 1956). The trend toward

significant difference for wives on the loving behavior variable may be explained in a similar manner.

Implications for Further Research

If marriage may be viewed as a system, then feedback is essential for the maintenance of that system. TWO-TO-ONE is a simulated approach to giving and receiving feedback. It permits players to check out, in a hypothetical situation, the effects of their behaviors on the feelings of their partner. A benefit of playing TWO-TO-ONE is that players learn they do not naturally know how their partner feels; they must receive feedback in order to achieve understanding.

The results of the present study can only be generalized to couples who are willing to attend a pre-natal class together. This is an important population as research has consistently shown marital satisfaction to decline at this stage of the family life cycle (Blood & Wolfe, 1960; Rollins & Feldman, 1970).

Two additional stages of the family life cycle should possibly be researched. TWO-TO-ONE would seem to have potential benefit for classes teaching marriage and pre-marriage courses. It would also appear beneficial for couples approaching the "empty nest" stage of the family life cycle. Both of these stages have in common with the pre-natal stage the factor of change entering the relationship. In 1956 Foote indicated the importance of continued matching of the husband and wife over the stages of development. TWO-TO-ONE seems to be a helpful tool in this process.

Additionally, further research could examine game playing in relationship to different cultural groups and personality traits.

Also, since TWO-TO-ONE does not emphasize competition, the relationship with attitudes of winning and losing might be examined.

A variable not examined in this study was "conceptual complexity" (Harvey, Hunt, & Schroder, 1961; Crouse, Karlins, & Schroder, 1968; Sawatzky, 1969). This is a crucial variable in relation to a systems approach to marriage. It is only logical to assume that the information exchange so important to such theorists as Bertalanffy, Bateson, and Watzlawich would be related to the ability of the individual component of the systems to process ideas. However, TWO-TO-ONE was tested in this study as a possible intervention into the marriage relationship by means of which husbands and wives could give and receive feedback. It would not seem appropriate to have tested it as to efficacy with a select population in regard to cognitive complexity.

Two additional concepts which are related to marital satisfaction are the ideas of profit and comparison level for alternatives. Exchange theorists (Homans, 1961; Thibaut & Kelley, 1959) have proposed that interpersonal relations are judged on the profit or loss that one senses in the relationship for himself, and that one remains in a relationship in regard to his judgment of profit or loss in comparison with his alternatives. Therefore, one may be in a losing relationship and choose to remain because he cannot visualize a better alternative. Or one may abandon a positive relationship because one judged to be better is available. This is a highly productive theory and in a future study could be examined by comparing level three perceptions on the Loving Behavior Inventory (Branch, 1973) with level one

perceptions, i.e., "How I see my behavior compared to how I see my behavior being seen by my partner," or "Do I feel appreciated?" Or I may compare level one perceptions, i.e., "How I see my behaviors as compared to how I see my partner's behavior," or in my perception, "Am I doing more or is my partner doing more?" Hopefully TWO-TO-ONE will aid the couple in the perception of the marital relationship as a system which can remain vital only so long as the partners in the system are encouraging one another's development.

At the present, this writer plans to pursue the development and investigation of a developmental marriage program and the effects on the children of participants in such a program. TWO-TO-ONE will continue to be used as will the Marriage Enrichment Program (Branch, 1972) and the Couples Communication Program (Miller, et al, 1975) along with other components which may be helpful.

Counselors have long pointed out that dysfunctional children are more often than not members of a family with a dysfunctional marriage. Perhaps the reverse is also true: More fully functioning marriages may produce more fully functioning children. What kind of children might their relationships produce?

"Oh brave new world that has such people in it."

(The Tempest, Shakespeare).

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A P P E N D I X I

APPENDIX I

Circle: Female or Male

Date: _____

Circle the game number: 1 2 3 4 5 6

WHEN YOU HAVE FINISHED A GAME, PLEASE RATE THE FOLLOWING ITEMS FROM 1 TO 4.

1. Playing the game tonight I was feeling:
(Unhappy) 1 2 3 4 (Happy)
2. Playing the game tonight was helpful in getting me to talk about situations important to our relationship:
(Don't see any relationship) 1 2 3 4 (Yes, definitely)
3. Watching T.V. or going to a movie together would have been just as stimulating:
(Disagree) 1 2 3 4 (Agree)
4. Playing the game tonight could possibly prevent us from having an argument in the future:
(Don't see any relationship) 1 2 3 4 (Yes, definitely)
5. Playing the game tonight was helpful in understanding my partner better:
(Don't see any relationship) 1 2 3 4 (Yes, definitely)
6. After playing the game tonight, I think that if people are in love they just naturally understand one another pretty well:
(Disagree) 1 2 3 4 (Agree)
7. Playing the game tonight I tried hard to beat my partner:
(Not particularly) 1 2 3 4 (Yes, definitely)
8. Playing the game tonight, if my partner and I disagreed I tried to get him/her to:
(Understand my position) 1 2 3 4 (Agree with my position)
9. Playing the game tonight was:
(Dull) 1 2 3 4 (Stimulating)
10. We began playing tonight at _____ o'clock and finished (including discussion) at _____ o'clock.

A P P E N D I X I I

APPENDIX II

After examining and/or playing TWO-TO-ONE please rate it on the following:

Tends to emphasize:

agreement	1	2	3	4	understanding
outcome	1	2	3	4	process (playing)
potential conflict situations which are irrelevant to marriage	1	2	3	4	potential conflict situations which are relevant to marriage
communication between roles	1	2	3	4	communication between persons

The material would tend to be:

dull	1	2	3	4	stimulating
------	---	---	---	---	-------------

Comment _____

harmful to couples having marital difficulties	1	2	3	4	beneficial to couples having marital difficulties
--	---	---	---	---	---

Comment _____

harmful to couples functioning "normally"	1	2	3	4	beneficial to couples functioning "normally"
---	---	---	---	---	--

Comment _____

I would _____ would not _____ recommend TWO-TO-ONE as homework or a supplement for counselling.

Comment _____

A P P E N D I X I I I

APPENDIX III

Please complete the following.

1. The situation cards for the most part were:

interesting	1	2	3	4	boring
relevant to our relation- ship	1	2	3	4	irrelevant to our relationship
disagreement producing	1	2	3	4	fun producing

Comments: _____

2. The personal viewpoint cards for the most part were:

appropriate to most situations	1	2	3	4	inappropriate to most situations
--------------------------------------	---	---	---	---	--

Comments: _____

3. The consequence cards for the most part were:

something the game could have done without	1	2	3	4	an exciting part of the game
--	---	---	---	---	------------------------------------

Comments: _____

4. The perceptual congruence chart for the most part was:

something the game could have done without	1	2	3	4	a fun way of keeping score
--	---	---	---	---	----------------------------------

Comments: _____

5. General comments: (use the back of page)

A P P E N D I X I V

Loving Behavior Inventory (Male

Loving Behavior Inventory (Female)

APPENDIX IV

Loving Behavior Inventory (Male)

form Ms

Name _____

L.B.I.

Date _____

In this series of statements, you will be considering relationship behaviors. Your answers will not be shown to your spouse. Please answer as honestly and accurately as you can.

Circle the number which represents how seldom or how often the following occur:

- | | Very Seldom | Some | Very Often |
|--|----------------------------------|------|------------|
| 1. I show an interest in listening to her or her interests | 1 2 3 4 5 6 7 | | |
| 2. I say or do things to let her know that I value and appreciate her. | 1 2 3 4 5 6 7 | | |
| 3. In a clear and definite manner, I let her know I would enjoy doing something or going somewhere with her. | 1 2 3 4 5 6 7 | | |
| 4. I involve myself in activities or interests she thinks are appropriate but do not include her. | (1) (4) (<u>7</u>) (4) (1) | | |
| | 1 2 3 4 5 6 7 | | |
| 5. I involve myself in activities or interests she thinks are inappropriate but do not include her. | (4) (<u>7</u>) (4) (3) (2) (1) | | |
| | 1 2 3 4 5 6 7 | | |
| 6. I tell her that she is loved. | 1 2 3 4 5 6 7 | | |
| 7. In a clear and definite manner, I let her know I desire a sexually pleasuring experience with her. | 1 2 3 4 5 6 7 | | |
| 8. During our times of sexual pleasuring, I let her know that she is pleasing me. | 1 2 3 4 5 6 7 | | |

(L.B.I. form Ms)

c E.B. Branch, Jr., 1973

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form Mo
L.B.I.

Circle the number which represents how seldom or how often the following occur:

- | | Very Seldom | | Some | | Very Often |
|---|----------------|-------|-------|-------|-------------------|
| 1. She shows an interest in listening to me or my interests. | 1 | 2 | 3 | 4 | 5 6 7 |
| 2. She says or does things to let me know that she values and appreciates me. | 1 | 2 | 3 | 4 | 5 6 7 |
| 3. In a clear and definite manner, she lets me know she would enjoy doing something or going somewhere with me. | 1 | 2 | 3 | 4 | 5 6 7 |
| 4. She involves herself in activities or interests I think are appropriate but do not include me. | (1) 1 | (3) 2 | (5) 3 | (7) 4 | (5) 5 (3) 6 (1) 7 |
| 5. She involves herself in activities or interests I think are inappropriate but do not include me. | (<u>7</u>) 1 | (5) 2 | (3) 3 | (2) 4 | (1) 5 6 7 |
| 6. She tells me that I am loved. | 1 | 2 | 3 | 4 | 5 6 7 |
| 7. In a clear and definite manner she lets me know she wants a sexually pleasuring experience with me. | 1 | 2 | 3 | 4 | 5 6 7 |
| 8. During our times of sexual pleasuring, she lets me know that I am pleasing her. | 1 | 2 | 3 | 4 | 5 6 7 |

(L.B.I. form Mo)
c E.B. Branch, Jr., 1973

form Mpo
L.B.I.

Circle the number which represents how seldom or how often the following occur:

	Very Seldom		Some		Very Often		
1. I think she sees me showing an interest in listening to her or her interests.	1	2	3	4	5	6	7
2. I think she sees me saying or doing things which let her know that I value and appreciate her.	1	2	3	4	5	6	7
3. I think she sees me clearly and definitely letting her know I would enjoy doing something or going somewhere with her.	1	2	3	4	5	6	7
4. I think she sees me involving myself in activities or interests she thinks are appropriate but do not include her.	(1)	(4)	(<u>7</u>)	(4)	(1)		
	1	2	3	4	5	6	7
5. I think she sees me involving myself in activities or interests she thinks are inappropriate but do not include her.	(5)	(<u>7</u>)	(4)	(3)	(2)	(1)	
	1	2	3	4	5	6	7
6. I think she sees me telling her she is loved.	1	2	3	4	5	6	7
7. I think she sees me clearly and definitely letting her know I desire a sexually pleasuring experience with her.	1	2	3	4	5	6	7
8. I think she sees me letting her know that she is pleasing me during our times of sexual pleasuring.	1	2	3	4	5	6	7

(L.B.I. form Mpo)
c E.B. Branch, Jr., 1973

Total score was used. Scoring adjustments for items 4 and 5 are indicated.

APPENDIX IV

Loving Behavior Inventory
(Female)form Fs

Name _____

L.B.I.

Date _____

In this series of statements, you will be considering relationship behaviors. Your answers will not be shown to your spouse. Please answer as honestly and accurately as you can.

Circle the number which represents how seldom or how often the following occur:

- | | Very Seldom | Some | Very Often |
|--|-------------|--------------|----------------------|
| 1. I show an interest in listening to his or his interests. | 1 | 2 | 3 4 5 6 7 |
| 2. I say or do things to let him know that I value and appreciate him. | 1 | 2 | 3 4 5 6 7 |
| 3. In a clear and definite manner, I let him know I would enjoy doing something or going somewhere with him. | 1 | 2 | 3 4 5 6 7 |
| 4. I involve myself in activities or interests he thinks are appropriate but do not include him. | (1) | (4) | (<u>7</u>) (4) (1) |
| | 1 | 2 | 3 4 5 6 7 |
| 5. I involve myself in activities or interests he thinks are inappropriate but do not include him. | (4) | (<u>7</u>) | (4) (3) (2) (1) |
| | 1 | 2 | 3 4 5 6 7 |
| 6. I tell him that he is loved. | 1 | 2 | 3 4 5 6 7 |
| 7. In a clear and definite manner, I let him know I desire a sexually pleasuring experience with him. | 1 | 2 | 3 4 5 6 7 |
| 8. During our times of sexual pleasuring, I let him know that he is pleasing me. | 1 | 2 | 3 4 5 6 7 |

(L.B.I. form Fs)

c E.B. Branch, Jr., 1973

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form Fo
L.B.I.

Circle the number which represents how seldom or how often the following occur:

- | | Very Seldom | | Some | | Very Often |
|---|-------------|----------|------|-----|-------------|
| 1. He shows an interest in listening to me or my interests. | 1 | 2 | 3 | 4 | 5 6 7 |
| 2. He says or does things to let me know he values and appreciates me. | 1 | 2 | 3 | 4 | 5 6 7 |
| 3. In a clear and definite manner, he lets me know he would enjoy doing something or going somewhere with me. | 1 | 2 | 3 | 4 | 5 6 7 |
| 4. He involves himself in activities or interests I think are appropriate but do not include me. | (1) | (3) | (5) | (7) | (5) (3) (1) |
| | 1 | 2 | 3 | 4 | 5 6 7 |
| 5. He involves himself in activities or interests I think are inappropriate but do not include me. | (| <u>7</u> |) | (5) | (3) (2) (1) |
| | 1 | 2 | 3 | 4 | 5 6 7 |
| 6. He tells me that I am loved. | 1 | 2 | 3 | 4 | 5 6 7 |
| 7. In a clear and definite manner he lets me know he wants a sexually pleasuring experience with me. | 1 | 2 | 3 | 4 | 5 6 7 |
| 8. During our times of sexual pleasuring, he lets me know that I am pleasing him. | 1 | 2 | 3 | 4 | 5 6 7 |

(L.B.I. form Fo)
c E.B. Branch, Jr., 1973

- 3 -

form Fpo
L.B.I.

Circle the number which represents how seldom or how often the following occur:

- | | Very Seldom | | Some | | Very Often |
|--|-------------|--------------|--------------|-----|------------|
| 1. I think he sees me showing an interest in listening to him or his interests. | 1 | 2 | 3 | 4 | 5 6 7 |
| 2. I think he sees me saying or doing things which let him know that I value and appreciate him. | 1 | 2 | 3 | 4 | 5 6 7 |
| 3. I think he sees me clearly and definitely letting him know I would enjoy doing something or going somewhere with him. | 1 | 2 | 3 | 4 | 5 6 7 |
| 4. I think he sees me involving myself in activities or interests he thinks are appropriate but do not include him. | (1) | (4) | (<u>7</u>) | (4) | (1) |
| | 1 | 2 | 3 | 4 | 5 6 7 |
| 5. I think he sees me involving myself in activities or interests he thinks are inappropriate but do not include him. | (5) | (<u>7</u>) | (4) | (3) | (2) (1) |
| | 1 | 2 | 3 | 4 | 5 6 7 |
| 6. I think he sees me telling him that he is loved. | 1 | 2 | 3 | 4 | 5 6 7 |
| 7. I think he sees me clearly and definitely letting him know I desire a sexually pleasuring experience with him. | 1 | 2 | 3 | 4 | 5 6 7 |
| 8. I think he sees me letting him know that he is pleasing me during our times of sexual pleasuring. | 1 | 2 | 3 | 4 | 5 6 7 |

(L.B.I. form Fpo)
c E.B. Branch, Jr., 1973

Total score was used. Scoring adjustments for items 4 and 5 are indicated.

A P P E N D I X V

Locke Marital Adjustment Questionnaire -- Modified Form

APPENDIX V

Locke Marital Adjustment Questionnaire Modified Form

All the questions can be answered by placing a check next to the appropriate answer. Please fill out all items. If you cannot give the exact answer to a question, answer the best you can. Give the answers that best fit your marriage at the present time.
Thank you very much.

1. Have you ever wished you had not married?
a. 2 Frequently
b. 2 Occasionally
c. 6 Rarely
2. If you had your life to live over again would you:
a. 7 Marry the same person
b. 1 Marry a different person
c. 1 Not marry at all
3. Do husband and wife engage in outside activities together?
a. 5 All of them
b. 4 Some of them
c. 2 Few of them
d. 2 None of them
4. In leisure time, which do you prefer?
a. 6 Both husband and wife to stay at home
b. 3 (4) Both to be on the go
c. 2 One to be on the go and other to stay at home
5. Do you and your mate generally talk things over together?
a. 2 Never
b. 2 Now and then
c. 4 Almost always
d. 5 Always
6. How often do you kiss your mate?
a. 5 Every day
b. 3 Now and then
c. 3 Almost never
7. Check any of the following items which you think have caused serious difficulties in your marriage.
a. Mate's attempt to control my spending money
b. Other difficulties over money
c. Religious difficulties
d. Different amusement interests
e. Lack of mutual friends
f. Constant bickering

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- g. Interference of in-laws
 h. Lack of mutual affection (no longer in love)
 i. Unsatisfying sex relations
 j. Selfishness and lack of cooperation
 k. Adultery
 l. Desire to have children
 m. Sterility of husband or wife
 n. Venereal diseases
 o. Mate paid attention to (became familiar with)
 another person

	Number Checked	Score
p. <u> </u> Desertion	0	6
q. <u> </u> Nonsupport	1	6
r. <u> </u> Drunkenness	2	4 (5)
s. <u> </u> Gambling	3	4
t. <u> </u> Ill health	4	2 (3)
u. <u> </u> Mate sent to jail	5	2 (3)
v. <u> </u> Other reasons	6	2

8. How many things satisfy you most about your marriage?
 a. 3 Nothing
 b. 3 One thing
 c. 4 Two things
 d. 5 Three or more
9. When disagreements arise they generally result in:
 a. 2 (3) Husband giving in
 b. 3 (2) Wife giving in
 c. 2 (2) Neither giving in
 d. 6 Agreement by mutual give and take
10. What is the total number of times you left mate or mate left you because of conflict?
 a. 7 No times
 b. 1 One or more
11. How frequently do you and your mate get on each other's nerves around the house?
 a. 5 Never
 b. 5 (4) Occasionally
 c. 3 Frequently
 d. 3 Almost always
 e. 3 Always
12. What are your feelings on sex relations between you and your mate?
 a. 5 Very enjoyable
 b. 4 (5) Enjoyable
 c. 2 Tolerable
 d. 2 Disgusting
 e. 2 Very disgusting

- 3 -

13. What are your mate's feelings on sex relations with you?
- a. 5 Very enjoyable
 - b. 4 (3) Enjoyable
 - c. 3 Tolerable
 - d. 3 Very disgusting

* * *

State approximate extent of agreement or disagreement between husband and wife on the following items:

14. Handling family finances (Example: installment buying)
- a. 5 Always agree
 - b. 5 Almost always agree
 - c. 2 Occasionally disagree
 - d. 2 Frequently disagree
 - e. 2 Almost always disagree
 - f. 2 Always disagree
15. Matters of recreation (Example: going to dances)
- a. 5 (4) Always agree
 - b. 4 Almost always agree
 - c. 4 (3) Occasionally disagree
 - d. 3 Frequently disagree
 - e. 3 Almost always disagree
 - f. 3 Always disagree
16. Demonstration of affection (Example: frequency of kissing)
- a. 5 Always agree
 - b. 4 Almost always agree
 - c. 3 Occasionally disagree
 - d. 3 Frequently disagree
 - e. 3 Almost always disagree
 - f. 3 Always disagree
17. Friends (Example: dislike of mate's friend)
- a. 5 Always agree
 - b. 5 Almost always agree
 - c. 3 (2) Occasionally disagree
 - d. 2 Frequently disagree
 - e. 2 Almost always disagree
 - f. 2 Always disagree
18. Intimate relations (Example: sex relations)
- a. 5 Always agree
 - b. 5 (4) Almost always agree
 - c. 2 (3) Occasionally disagree
 - d. 2 (3) Frequently disagree
 - e. 2 (3) Almost always disagree
 - f. 2 (3) Always disagree

- 4 -

19. Ways of dealing with in-laws
 a. 5 Always agree
 b. 5 Almost always agree
 c. 2 (3) Occasionally disagree
 d. 2 (3) Frequently disagree
 e. 2 (3) Almost always disagree
 f. 2 (3) Always disagree
20. The amount of time that should be spent together
 a. 5 (6) Always agree
 b. 4 Almost always agree
 c. 2 (3) Occasionally disagree
 d. 2 Frequently disagree
 e. 2 Almost always disagree
 f. 2 Always disagree
21. Conventionality (Example: right, good or proper conduct)
 a. 5 Always agree
 b. 5 (4) Almost always agree
 c. 2 Occasionally disagree
 d. 2 Frequently disagree
 e. 2 Almost always disagree
 f. 2 Always disagree
22. Aims, goals, and things believed to be important in life
 a. 6 Always agree
 b. 4 Almost always agree
 c. 2 Occasionally disagree
 d. 2 Frequently disagree
 e. 2 Almost always disagree
 f. 2 Always disagree

* * *

23. On the scale line below check the mark which best describes the degree of happiness, everything considered, of your marriage. The middle point, "happy" represents the degree of happiness which most people get from marriage, and the scale gradually ranges on one side to those few who experience extreme joy in marriage and on the other to those few who are very unhappy in marriage.

0	1	3	7	10	13	18
*	*	*	*	*	*	*
Very Unhappy			Happy		Perfectly Happy	

Scores given are for husbands form and are the same for the wife's form except where wife's score is given in parentheses.

A P P E N D I X V I

Self-Disclosure Questionnaire

APPENDIX VI

Self-Disclosure Questionnaire

Name _____

Date _____

In this series of questions, you will be considering some personal and private matters. Your answers will not be shown to your spouse. We would like you to answer these questions as honestly and accurately as you can.

Circle the number which represents how little or how much you tell your spouse about:

	very little		some		very much	
1. When you feel especially proud or pleased with yourself.	1	2	3	4	5	6 7
2. When you feel worried about something.	1	2	3	4	5	6 7
3. How you feel when you recognize your spouse understands what you mean.	1	2	3	4	5	6 7
4. When you feel proud or pleased with your spouse.	1	2	3	4	5	6 7
5. How you feel when you and your spouse disagree about something.	1	2	3	4	5	6 7
6. How you feel when your spouse behaves in some way you like.	1	2	3	4	5	6 7
7. When your feelings are hurt by something your spouse does.	1	2	3	4	5	6 7
8. When you feel discouraged or blue.	1	2	3	4	5	6 7
9. When you feel happy about something.	1	2	3	4	5	6 7
10. Feelings about your own sexual attractiveness to your spouse.	1	2	3	4	5	6 7
11. Aspects of your own personality that you like.	1	2	3	4	5	6 7
12. How you feel when you do not understand what your spouse means.	1	2	3	4	5	6 7
13. Your sexual feelings toward your spouse.	1	2	3	4	5	6 7

- 2 -

		very little		some		very often	
14.	Aspects of your personality that you dislike.	1	2	3	4	5	6 7
15.	How you feel when you agree with your spouse.	1	2	3	4	5	6 7
16.	Your sexual feelings toward persons besides your spouse.	1	2	3	4	5	6 7
17.	When you have difficulty expressing your feelings.	1	2	3	4	5	6 7
18.	How you feel when your spouse does something nice for you.	1	2	3	4	5	6 7
19.	How you feel when your spouse behaves in a way you do not like.	1	2	3	4	5	6 7
20.	When you feel excited about something.	1	2	3	4	5	6 7

(S.D.Q.)
c (Miller, Nunnally, Wackman)

Total score was used.

A P P E N D I X V I I

APPENDIX VII

Ed & Mary Ette Branch
The Hyphen Consultants, Ltd.
10022 - 103 Street
Edmonton, Alberta
429-3834

October 10, 1975

Dear _____

As some of you may know, Mary Ette and I lead the husband and wife communication session of the General Hospital's pre-natal series. We are particularly interested in marriage during the stage when young children are present or expected in the home. Now you know one reason I am writing to you.

Another reason is that we need your help in order to complete several years of work with a research study. We are requesting a selected number of couples to spend a few hours in an enjoyable activity spread over a period of two weeks. The activity is to take place in your home with just the two of you present.

In order to answer questions and give you dates for the study you will be contacted by telephone within a few days. We really need the participation of every couple selected to receive this request. We have designed the study in a way I think you will find both enjoyable and informative. When the study is completed, we will be happy to fill in the details for you.

Therefore, thank you ahead of time.

Sincerely,

B30162